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EXAMINER				
REESE, DAVID C				
ART UNIT		PAPER NUMBER		
3677				
NOTIFICATION DATE		DELIVERY MODE		
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/571,049

Applicant(s)

BAUER, ROBERT

Examiner

DAVID REESE

Art Unit

3677

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 February 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 March 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/GS/US)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

DETAILED ACTION

Status of Claims

- Claims 1-19 are pending.

Drawings

[1] The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the combination of one sleeve disposed on the inner faces of the center holes and that a further sleeve is disposed on the outer faces of the lock washer from claim 11 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

[2] The abstract of the disclosure is objected to because of the use of legal phraseology such as "wherein", "characterized," etc. Correction is required. See MPEP § 608.01(b).

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

[3] In addition, the specification fails to account for the below headings and layout:

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.

- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Claim Objections

[4] Claims 2, 6, and 8 are objected to because of the following informalities: the use of the word, "possibly according to" is improper.

Claim 1 is objected to because of the following informalities: "one" should be "on". Further, "the inner face that is provided with teeth" should only be "the inner surface" since the inner face has already been claimed with teeth per the "inner surfaces lying on each other have teeth."

[5] Claim 1 recites the limitation "the inner surfaces" and "the outer surfaces" in the instant claim. There is insufficient antecedent basis for this limitation in the claim.

Claims 2-5 recite the limitation "the tooth edges" and "the tooth flanks" in the instant claim. There is insufficient antecedent basis for this limitation in the claim.

Claims 6-7 recite the limitation "the edges" in the instant claim. There is insufficient antecedent basis for this limitation in the claim.

Claim 15 recite the limitation "the tabs" in the instant claim. There is insufficient antecedent basis for this limitation in the claim.

Ultimately, examiner notes that the instant application is replete with grammatical, antecedent and other foreign translation issues. Applicants cooperation is asked in ensuring that these and similar issues are resolved in response to this office action.

Claim Rejections - 35 USC § 112

[6] The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

[7] Claims 6-7, 10-11, and 19 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With regard to claims 6-7, which set of teeth (i.e., the teeth from the inner or outer surface from claim 1) is "teeth" from the instant claims referring to?

With regard to claims 10 and 11, it is unclear how the sleeve can be disposed on the outer faces of the lock washers (i.e., figures 24-26) when the groove is positively claimed in depending independent claim 1 as being tied to the center hole: "at least one center hole has a rounding or a groove...").

With regard to claim 19, the claim positively claims a groove; however, a groove was already claimed in depending independent claim 1.

Claim Rejections - 35 USC § 103

[8] The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

[9] Claims 1-10 and 12-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over McKinlay, US-5,080,545, in view of Terry, US-4,709,555.

Although the invention is not identically disclosed or described as set forth 35 U.S.C. 102, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a designer having ordinary skill in the art to which said subject matter pertains, the invention is not patentable.

As for Claim 1, McKinlay discloses of a locking element for holding together threaded parts such as screws and nuts against undesired loosening, comprising at least two annular lock washers (11) lying on each other and having center holes, possessing inner (29) and outer surfaces (25), wherein the inner surfaces (29) lying on each other have teeth (31), characterized in that at least one center hole has a round ring or a groove (35) on the inner face (29) that is provided with teeth (31).

The difference between the claim and McKinlay is that McKinlay does not expressly state that the outer faces (25) are provided with teeth. Terry discloses a locking fastener similar to that of McKinlay. In addition, Terry further teaches of the outer faces of the lock washers provided with teeth (18i). It would have been obvious to one of ordinary skill in the art, having the disclosures of McKinlay and Terry before him at the time the invention was made, to modify the outer surface of McKinlay to include teeth, as in Terry. One would have been motivated to make such a combination because such a configuration allows for further securement and rotation prevention means to the assembly.

Re: Claim 2, characterized in that the tooth edges (31) of the tooth flanks (31) are oriented off-radial.

Re: Claim 3, characterized in that the tooth edges of the tooth flanks are v-shaped.

Note that those of ordinary skill in the art would appreciate that a modification such as a mere change in shape of a prior art device is a design consideration within the skill of the art. *In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966).

Re: Claim 4, characterized in that the tooth edges of the tooth flanks are U-shaped.

Note that those of ordinary skill in the art would appreciate that a modification such as a mere change in shape of a prior art device is a design consideration within the skill of the art. *In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966).

Re: Claim 5, characterized in that the tooth edges of the tooth flanks are S-shaped.

Note that those of ordinary skill in the art would appreciate that a modification such as a mere change in shape of a prior art device is a design consideration within the skill of the art. *In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966).

Re: Claim 6, characterized in that the edges of the teeth have a non-radial direction.

Note that those of ordinary skill in the art would appreciate that a modification such as a mere change in shape of a prior art device is a design consideration within the skill of the art. *In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966).

Re: Claim 7, characterized in that the edges of the teeth have a curvature.

Note that those of ordinary skill in the art would appreciate that a modification such as a mere change in shape of a prior art device is a design consideration within the skill of the art. *In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966).

Re: Claim 8, characterized in that the lock washers (11) are connected to each other by means of a sleeve (15).

Re: Claim 9, characterized in that the sleeve (15) is disposed on the inner faces (29) of the center holes (see fig. 3).

Re: Claim 10, characterized in that the sleeve (15) is disposed on the outer faces of the lock washers (if one labels 29 as the outer surface and 25 as the inner surface; examiner notes that applicant has failed to define the exact location of these two surfaces).

Re: Claim 12, characterized in that the sleeve (15) has a lip (see fig. 3 at 33) that laterally extends over or into an edge of the lock washers (11).

Re: Claim 13, characterized in that the lip is annular (see fig. 3 at 33).

Re: Claim 14, characterized in that the lip is formed by tabs (see fig. 3 at 33).

Re: Claim 15, characterized in that the tabs are annular segments (see fig. 3 at 33).

Re: Claim 16, characterized in that the sleeve is a slotted ring (15 has a slot in it, above/below 33).

Re: Claim 17, characterized in that a transition between the sleeve (15) and the lip (at 33) has a rounding and/or a chamfer (above/below 33).

Re: Claim 18, characterized in that a transition between the sleeve (15) and the lip (at 33) is designed perpendicular.

Re: Claim 19, characterized in that the lock washers (11) have a groove (33) for receiving the lip (see fig. 3).

Conclusion

[10] The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patents are cited further to show the state of the art with respect to this particular type of fastener; as well as their extreme relevance to the current application as many read extensively onto the claimed invention: please see submitted notice of reference cited.

[11] Any inquiry concerning this communication or earlier communications from the examiner should be directed to David C. Reese whose telephone number is (571) 272-7082. The examiner can normally be reached on 7:30 am-6:00 pm Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Victor Batson can be reached at (571) 272-6987. The fax number for the organization where this application or proceeding is assigned is the following: (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/DAVID REESE/
Examiner, Art Unit 3677